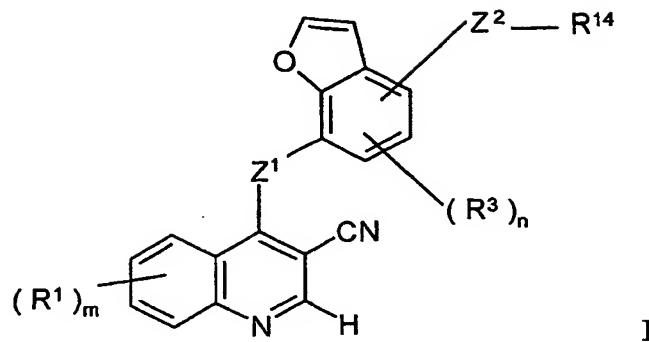


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**CLAIMS**

## 1. A quinoline derivative of the Formula I



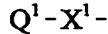
5

wherein  $Z^1$  is an O, S, SO, SO<sub>2</sub>, N(R<sup>2</sup>) or C(R<sup>2</sup>)<sub>2</sub> group, wherein each R<sup>2</sup> group, which may be the same or different, is hydrogen or (1-6C)alkyl;

m is 0, 1, 2, 3 or 4;

10 each R<sup>1</sup> group, which may be the same or different, is selected from halogeno, trifluoromethyl, cyano, isocyano, nitro, hydroxy, mercapto, amino, formyl, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphanyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, 15 N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkenoylamino, (3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :

20



wherein X<sup>1</sup> is a direct bond or is selected from O, S, SO, SO<sub>2</sub>, N(R<sup>4</sup>), CO, CH(OR<sup>4</sup>), CON(R<sup>4</sup>), N(R<sup>4</sup>)CO, SO<sub>2</sub>N(R<sup>4</sup>), N(R<sup>4</sup>)SO<sub>2</sub>, OC(R<sup>4</sup>)<sub>2</sub>, SC(R<sup>4</sup>)<sub>2</sub> and N(R<sup>4</sup>)C(R<sup>4</sup>)<sub>2</sub>, wherein R<sup>4</sup> is hydrogen or (1-6C)alkyl, and Q<sup>1</sup> is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl, or (R<sup>1</sup>)<sub>m</sub> is (1-3C)alkylenedioxy, and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R<sup>1</sup> substituent are optionally separated by the insertion into the chain of a group selected from O, S, SO, SO<sub>2</sub>,

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$N(R^5)$ ,  $CO$ ,  $CH(OR^5)$ ,  $CON(R^5)$ ,  $N(R^5)CO$ ,  $SO_2N(R^5)$ ,  $N(R^5)SO_2$ ,  $CH=CH$  and  $C\equiv C$  wherein  $R^5$  is hydrogen or (1-6C)alkyl or, when the inserted group is  $N(R^5)$ ,  $R^5$  may also be

(2-6C)alkanoyl,

and wherein any  $CH_2=CH-$  or  $HC\equiv C-$  group within a  $R^1$  substituent optionally bears at

- 5 the terminal  $CH_2=$  or  $HC\equiv$  position a substituent selected from halogeno, carboxy, carbamoyl, (1-6C)alkoxycarbonyl,  $\underline{N}$ -(1-6C)alkylcarbamoyl,  $\underline{N},\underline{N}$ -di-[(1-6C)alkyl]carbamoyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl or from a group of the formula :

$Q^2-X^2-$

- 10 wherein  $X^2$  is a direct bond or is selected from  $CO$  and  $N(R^6)CO$ , wherein  $R^6$  is hydrogen or (1-6C)alkyl, and  $Q^2$  is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

- 15 and wherein any  $CH$ ,  $CH_2$  or  $CH_3$  group within a  $R^1$  substituent optionally bears on each said  $CH$ ,  $CH_2$  or  $CH_3$  group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl,  $\underline{N}$ -(1-6C)alkylcarbamoyl,  $\underline{N},\underline{N}$ -di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino,  $\underline{N}$ -(1-6C)alkyl-(2-6C)alkanoylamino,  $\underline{N}$ -(1-6C)alkylsulphamoyl,  $\underline{N},\underline{N}$ -di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino,  $\underline{N}$ -(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :

$-X^3-Q^3$

- 20 wherein  $X^3$  is a direct bond or is selected from  $O$ ,  $S$ ,  $SO$ ,  $SO_2$ ,  $N(R^7)$ ,  $CO$ ,  $CH(OR^7)$ ,  $CON(R^7)$ ,  $N(R^7)CO$ ,  $SO_2N(R^7)$ ,  $N(R^7)SO_2$ ,  $C(R^7)_2O$ ,  $C(R^7)_2S$  and  $N(R^7)C(R^7)_2$ , wherein  $R^7$  is hydrogen or (1-6C)alkyl, and  $Q^3$  is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

- 25 and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on  $R^1$  optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino,

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di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl,  
N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl,  
N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-

5 (1-6C)alkanesulphonylamino or from a group of the formula :

$-X^4-R^8$

wherein  $X^4$  is a direct bond or is selected from O and N( $R^9$ ), wherein  $R^9$  is hydrogen or (1-6C)alkyl, and  $R^8$  is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-  
10 (1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl or (1-6C)alkoxycarbonylamino-(1-6C)alkyl  
or from a group of the formula :

$-X^5-Q^4$

wherein  $X^5$  is a direct bond or is selected from O, N( $R^{10}$ ) and CO, wherein  $R^{10}$  is hydrogen or (1-6C)alkyl, and  $Q^4$  is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or  
15 heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

and wherein any heterocyclyl group within a substituent on  $R^1$  optionally bears 1 or 2 oxo or thioxo substituents;

20  $n$  is 0, 1, 2 or 3;

each  $R^3$  group is halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyoxy, (1-6C)alkylthio, (1-6C)alkylsulphanyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl,  
25 N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkenoylamino, (3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino,  
N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :

30  $-X^6-R^{11}$

wherein  $X^6$  is a direct bond or is selected from O and N( $R^{12}$ ), wherein  $R^{12}$  is hydrogen or (1-6C)alkyl, and  $R^{11}$  is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl,

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cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl or  
di-[(1-6C)alkyl]amino-(1-6C)alkyl;

$Z^2$  is a  $C\equiv C$  or  $C(R^{13})=C(R^{13})$  group, wherein each  $R^{13}$  group, which may be the same  
or different, is hydrogen or (1-6C)alkyl; and

- 5         $R^{14}$  is selected from halogeno, cyano, isocyano, formyl, carboxy, carbamoyl,  
(2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl,  
N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, N-(1-6C)alkylsulphamoyl,  
N,N-di-[(1-6C)alkyl]sulphamoyl, halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl,  
(1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-  
10      (1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl,  
(1-6C)alkoxycarbonylamino-(1-6C)alkyl or from a group of the formula :

$-X^7-Q^5$

- wherein  $X^7$  is a direct bond or is selected from  $CO$ ,  $CH(OR^{15})$ ,  $CON(R^{15})$  or  $SO_2N(R^{15})$ ,  
wherein  $R^{15}$  is hydrogen or (1-6C)alkyl, and  $Q^5$  is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl,  
15      (3-7C)cycloalkyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or  
heterocyclyl-(1-6C)alkyl,  
and wherein any  $CH$ ,  $CH_2$  or  $CH_3$  group within a  $R^{14}$  substituent optionally bears on  
each said  $CH$ ,  $CH_2$  or  $CH_3$  group one or more halogeno or (1-6C)alkyl substituents or a  
substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy,  
20      (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino,  
di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl,  
N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-  
(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl,  
N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino,  
25      N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula :

$-X^8-Q^6$

- wherein  $X^8$  is a direct bond or is selected from  $O$ ,  $S$ ,  $SO$ ,  $SO_2$ ,  $N(R^{16})$ ,  $CO$ ,  $CH(OR^{16})$ ,  
 $CON(R^{16})$ ,  $N(R^{16})CO$ ,  $SO_2N(R^{16})$ ,  $N(R^{16})SO_2$ ,  $C(R^{16})_2O$ ,  $C(R^{16})_2S$  and  $N(R^{16})C(R^{16})_2$ ,  
wherein  $R^{16}$  is hydrogen or (1-6C)alkyl, and  $Q^6$  is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl,  
30      (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl,  
heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

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- and wherein any aryl, heteroaryl or heterocycll group within a substituent on R<sup>14</sup> optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy,
- 5 (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-
- 10 (1-6C)alkanesulphonylamino or from a group of the formula :

- X<sup>9</sup>-R<sup>17</sup>

- wherein X<sup>9</sup> is a direct bond or is selected from O and N(R<sup>18</sup>), wherein R<sup>18</sup> is hydrogen or (1-6C)alkyl, and R<sup>17</sup> is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-
- 15 (1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl, or from a group of the formula :

- X<sup>10</sup>-Q<sup>7</sup>

- wherein X<sup>10</sup> is a direct bond or is selected from O, N(R<sup>19</sup>) and CO, wherein R<sup>19</sup> is hydrogen or (1-6C)alkyl, and Q<sup>7</sup> is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocycll or heterocycll-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

- and wherein any heterocycll group within a substituent on R<sup>14</sup> optionally bears 1 or 2 oxo or thioxo substituents;
- 25 or a pharmaceutically-acceptable salt thereof.

2. A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, Z<sup>1</sup>, Z<sup>2</sup>, m and n have any of the meanings defined in claim 1 and
- 30 R<sup>14</sup> is selected from halogeno, cyano, formyl, carboxy, carbamoyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl,

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halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl or from a group of the formula :

$-X^7-Q^5$

- 5 wherein  $X^7$  is a direct bond or CO and  $Q^5$  is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl, and wherein any  $CH_2$  or  $CH_3$  group within a  $R^{14}$  substituent optionally bears on each said  $CH_2$  or  $CH_3$  group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-10 6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino or from a group of the formula :

$-X^8-Q^6$

- wherein  $X^8$  is a direct bond or is selected from O,  $N(R^{16})$ ,  $CON(R^{16})$ ,  $N(R^{16})CO$  and  $C(R^{16})_2O$ , 15 wherein  $R^{16}$  is hydrogen or (1-6C)alkyl, and  $Q^6$  is heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl, and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on  $R^{14}$  optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, hydroxy, amino, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, 20 (2-8C)alkynyl, (1-6C)alkoxy, (1-6C)alkylsulphonyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl and (2-6C)alkanoyl, or optionally bears 1 substituent selected from a group of the formula :

$-X^9-R^{17}$

- wherein  $X^9$  is a direct bond or is selected from O and  $N(R^{18})$ , wherein  $R^{18}$  is hydrogen or 25 (1-6C)alkyl, and  $R^{17}$  is hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl, and from a group of the formula :

$-X^{10}-Q^7$

- 30 wherein  $X^{10}$  is a direct bond or is selected from O,  $N(R^{19})$  and CO, wherein  $R^{19}$  is hydrogen or (1-6C)alkyl, and  $Q^7$  is heterocyclyl or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2

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substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl and (1-6C)alkoxy,

and wherein any heterocyclyl group within a substituent on R<sup>14</sup> optionally bears 1 or 2 oxo substituents;

5

3. A quinoline derivative of the Formula I according to claim 1 wherein :

Z<sup>1</sup> is O or NH;

m is 1 and the R<sup>1</sup> group is located at the 5-, 6- or 7-position or m is 2 and each R<sup>1</sup> group, which may be the same or different, is located at the 5- and 7-positions or at the 6- and 10 7-positions and R<sup>1</sup> is selected from hydroxy, amino, methyl, ethyl, propyl, butyl, methoxy, ethoxy, propoxy, isopropoxy, butoxy, pent-4-nyloxy, hex-5-nyloxy, methylamino, ethylamino, dimethylamino, diethylamino, acetamido, propionamido, 2-imidazol-1-yloxy, 2-(1,2,4-triazol-1-yl)ethoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy, 2-pyrrolidin-1-yloxy, 3-pyrrolidin-1-ylpropoxy, 4-pyrrolidin-1-ylbutoxy, 15 pyrrolidin-3-yloxy, pyrrolidin-2-ylmethoxy, 2-pyrrolidin-2-yloxy, 3-pyrrolidin-2-ylpropoxy, 2-morpholinoethoxy, 3-morpholinopropoxy, 4-morpholinobutoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro- 4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, 4-piperidinobutoxy, piperidin-3-yloxy, piperidin-4-yloxy, piperidin-3-ylmethoxy, piperidin-4-ylmethoxy, 20 2-piperidin-3-yloxy, 3-piperidin-3-ylpropoxy, 2-piperidin-4-yloxy, 3-piperidin-4-ylpropoxy, 2-homopiperidin-1-yloxy, 3-homopiperidin-1-ylpropoxy, 2-piperazin-1-yloxy, 3-piperazin-1-ylpropoxy, 4-piperazin-1-ylbutoxy, 2-homopiperazin-1-yloxy and 3-homopiperazin-1-ylpropoxy,

and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R<sup>1</sup> substituent 25 are optionally separated by the insertion into the chain of a group selected from O, NH, N(Me), CH=CH and C≡C,

and wherein any CH<sub>2</sub> or CH<sub>3</sub> group within a R<sup>1</sup> substituent optionally bears on each said CH<sub>2</sub> or CH<sub>3</sub> group one or more fluoro or chloro groups or a substituent selected from hydroxy, amino, methoxy, methylsulphonyl, methylamino, dimethylamino, diethylamino, 30 N-ethyl-N-methylamino, N-isopropyl-N-methylamino, N-methyl-N-propylamino and acetoxy; and wherein any heteroaryl or heterocyclyl group within a substituent on R<sup>1</sup> optionally bears 1 or 2 substituents, which may be the same or different, selected from fluoro, chloro,

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- trifluoromethyl, hydroxy, amino, carbamoyl, methyl, ethyl, methoxy, N-methylcarbamoyl and N,N-dimethylcarbamoyl and a pyrrolidin-2-yl, piperidin-3-yl, piperidin-4-yl, piperazin-1-yl or homopiperazin-1-yl group within a R<sup>1</sup> substituent is optionally N-substituted with allyl, methylsulphonyl, acetyl, 2-fluoroethyl, 3-fluoropropyl, 2-methoxyethyl, 3-methoxypropyl,
- 5 cyanomethyl, 2-aminoethyl, 3-aminopropyl, 2-methylaminoethyl, 3-methylaminopropyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, 2-pyrrolidin-1-yethyl, 3-pyrrolidin-1-ylpropyl, 2-morpholinoethyl, 3-morpholinopropyl, 2-piperidinoethyl, 3-piperidinopropyl, 2-piperazin-1-yethyl or 3-piperazin-1-ylpropyl, the last 8 of which substituents each optionally bears 1 or 2 substituents, which may be the same or different,
- 10 selected from fluoro, chloro, methyl and methoxy,  
and wherein any heterocyclyl group within a substituent on R<sup>1</sup> optionally bears 1 or 2 oxo substituents;
- n is 0 or 1 and the R<sup>3</sup> group, if present, is located at the 5- or 6-position of the benzofuran-7-yl group and is selected from fluoro, chloro, bromo, trifluoromethyl, cyano,
- 15 hydroxy, methyl, ethyl, vinyl, allyl, ethynyl, methoxy and ethoxy;  
Z<sup>2</sup> is a C≡C or CH=CH group; and  
R<sup>14</sup> is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N,N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N,N-diethylcarbamoyl, acetyl, propionyl, chloromethyl,
- 20 2-chloroethyl, 3-chloropropyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, 2-cyanoethyl, 3-cyanopropyl, methylaminomethyl, ethylaminomethyl, 2-methylaminoethyl, 3-methylaminopropyl, 2-ethylaminoethyl, 3-ethylaminopropyl, dimethylaminomethyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, acetamidomethyl, 2-acetamidoethyl and
- 25 3-acetamidopropyl, or from a group of the formula :

-X<sup>7</sup>-Q<sup>5</sup>

- wherein X<sup>7</sup> is a direct bond or CO and Q<sup>5</sup> is 1-pyrrolidinyl, morpholino, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl, piperidino, 1-homopiperidinyl, piperazin-1-yl, homopiperazin-1-yl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1-homopiperidinylmethyl,
- 30 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl, piperazin-1-ylmethyl, homopiperazin-1-ylmethyl or 3-morpholinopropyl,

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and wherein any  $\text{CH}_2$  or  $\text{CH}_3$  group within a  $\text{R}^{14}$  substituent optionally bears on each said  $\text{CH}_2$  or  $\text{CH}_3$  group one or more fluoro, chloro or methyl groups or a substituent selected from hydroxy, amino, methoxy, methylamino, dimethylamino, acetoxy, acetamido and N-methylacetamido,

5 and wherein any heterocyclyl group within a substituent on  $\text{R}^{14}$  optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from hydroxy, amino, carbamoyl, methyl, ethyl, allyl, 2-propynyl, methoxy, methylsulphonyl, N-methylcarbamoyl, N,N-dimethylcarbamoyl and acetyl, or optionally bears 1 substituent selected from a group of the formula :

10  $-\text{X}^9-\text{R}^{17}$

wherein  $\text{X}^9$  is a direct bond and  $\text{R}^{17}$  is 2-hydroxyethyl, 3-hydroxypropyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, aminomethyl, methylaminomethyl, dimethylaminomethyl, acetamidomethyl, methoxycarbonylaminomethyl, ethoxycarbonylaminomethyl or tert-butoxycarbonylaminomethyl,

15 and wherein any heterocyclyl group within a substituent on  $\text{R}^{14}$  optionally bears 1 or 2 oxo substituents;  
or a pharmaceutically-acceptable acid-addition salt thereof.

4. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof,  
20 according to claim 1 wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ ,  $\text{R}^{14}$ ,  $\text{Z}^2$ ,  $\text{m}$  and  $\text{n}$  have any of the meanings defined in  
claim 1 and  $\text{Z}^1$  is NH.

5. A quinoline derivative of the Formula I according to claim 1 wherein :

$\text{Z}^1$  is NH;

25  $\text{m}$  is 2 and the first  $\text{R}^1$  group is a 6-methoxy group and the second  $\text{R}^1$  group is located at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy, 3-fluoropropoxy, 3-chloropropoxy, 2-methylsulphonylethoxy, 3-methylsulphonylpropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy, 2-pyrrolidin-1-yethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy, 3-morpholinopropoxy,  
30 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, piperidin-3-ylmethoxy, N-methylpiperidin-3-ylmethoxy, piperidin-4-ylmethoxy, N-methylpiperidin-4-ylmethoxy,

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- 2-piperidin-3-yethoxy, 2-(N-methylpiperidin-3-yl)ethoxy, 3-piperidin-3-ylpropoxy,  
 3-(N-methylpiperidin-3-yl)propoxy, 2-piperidin-4-yethoxy, 2-(N-methylpiperidin-  
 4-yl)ethoxy, 3-piperidin-4-ylpropoxy, 3-(N-methylpiperidin-4-yl)propoxy,  
 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,  
 5 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,  
 3-(4-acetyl
 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,  
 3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,  
 3-(3-oxopiperazin-1-yl)propoxy, 2-(2-pyrrolidin-1-yethoxy)ethoxy,  
 10 2-(2-morpholinoethoxy)ethoxy, 2-(2-piperidinoethoxy)ethoxy and  
 2-[2-(4-methylpiperazin-1-yl)ethoxy]ethoxy;

n is 0 or n is 1 and the R<sup>3</sup> group, if present, is located at the 5- position of the benzofuran-7-yl group and is selected from chloro and bromo;

the -Z<sup>2</sup>-R<sup>14</sup> group is located at the 4-position on the benzofuran-7-yl group,

- 15 Z<sup>2</sup> is a C≡C or CH=CH group; and

R<sup>14</sup> is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N-(2-methoxyethyl)carbamoyl, N,N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N-(2-methoxyethyl)-N-methylcarbamoyl, acetyl, propionyl, chloromethyl, 2-chloroethyl, 3-chloropropyl, 20 hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl, dimethylaminomethyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylcarbonyl, piperidinocarbonyl, piperazin-1-ylcarbonyl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl, 25 piperazin-1-ylmethyl and 3-morpholinopropyl;

or a pharmaceutically-acceptable acid-addition salt thereof.

6. A quinoline derivative of the Formula I according to claim 1 wherein :

Z<sup>1</sup> is NH;

- 30 m is 2 and the first R<sup>1</sup> group is a 6-methoxy group and the second R<sup>1</sup> group is located at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy, 3-fluoropropoxy, 3-chloropropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy,

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2-pyrrolidin-1-yethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy,  
3-morpholinopropoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy,  
3-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy,  
3-piperidinopropoxy, 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,  
5 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,  
3-(4-acetylpirerazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy,  
3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,  
3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,  
3-(3-oxopiperazin-1-yl)propoxy and 2-(2-pyrrolidin-1-yethoxy)ethoxy;

10 n is 0 or n is 1 and R<sup>3</sup> is a chloro group located at the 5-position of the  
benzofuran-7-yl group;

the -Z<sup>2</sup>-R<sup>14</sup> group is located at the 4-position on the benzofuran-7-yl group,  
Z<sup>2</sup> is a C≡C group; and

R<sup>14</sup> is selected from hydroxymethyl, methoxymethyl, dimethylaminomethyl,

15 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1,1-dioxotetrahydro-  
4H-1,4-thiazin-4-ylmethyl and piperazin-1-ylmethyl;  
or a pharmaceutically-acceptable acid-addition salt thereof.

7. A quinoline derivative of the Formula I according to claim 1 wherein :

20 Z<sup>1</sup> is NH;

m is 2 and the first R<sup>1</sup> group is a 6-methoxy group and the second R<sup>1</sup> group is located  
at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy,  
3-fluoropropoxy, 3-chloropropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy,

2-pyrrolidin-1-yethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy,

25 3-morpholinopropoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy,  
3-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy,

3-piperidinopropoxy, 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,

3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,

3-(4-acetylpirerazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy,

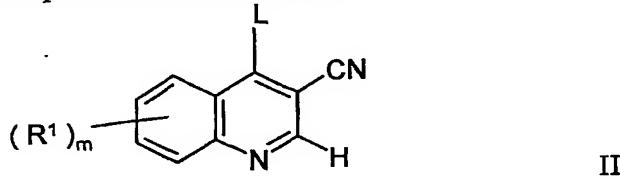
30 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,  
3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,  
3-(3-oxopiperazin-1-yl)propoxy and 2-(2-pyrrolidin-1-yethoxy)ethoxy;

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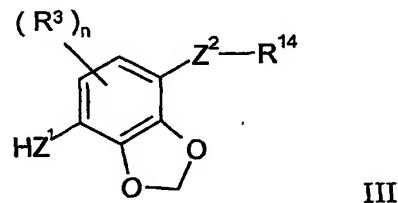
n is 0 or n is 1 and R<sup>3</sup> is a chloro group located at the 5-position of the 1,3-benzodioxol-4-yl group; the -Z<sup>2</sup>-R<sup>14</sup> group is located at the 4-position on the benzofuran-7-yl group, Z<sup>2</sup> is a CH=CH group; and 5 R<sup>14</sup> is selected from cyano, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N-(2-methoxyethyl)carbamoyl, N,N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N-(2-methoxyethyl)-N-methylcarbamoyl, acetyl, propionyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylcarbonyl, piperidinocarbonyl and 10 piperazin-1-ylcarbonyl; or a pharmaceutically-acceptable acid-addition salt thereof.

8. A process for the preparation of a quinoline derivative of the Formula I or a pharmaceutically-acceptable salt thereof, according to claim 1 which comprises:-

15 (a) the reaction of a quinoline of the Formula II



wherein L is a displaceable group and m and R<sup>1</sup> have any of the meanings defined in claim 1 hereinbefore except that any functional group is protected if necessary, with a compound of the Formula III



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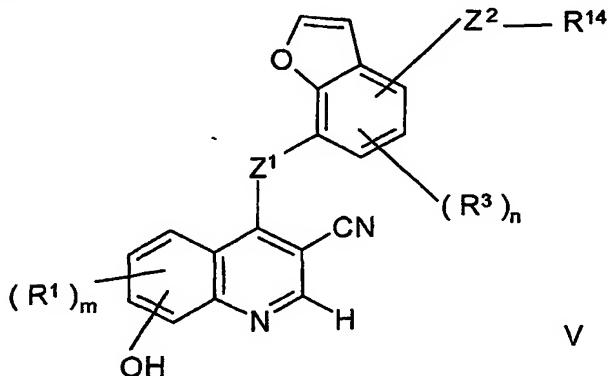
wherein Z<sup>1</sup> is O, S, or N(R<sup>2</sup>) and n, R<sup>3</sup>, R<sup>2</sup>, Z<sup>2</sup> and R<sup>14</sup> have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

25 (b) for the production of those compounds of the Formula I wherein at least one R<sup>1</sup> group is a group of the formula

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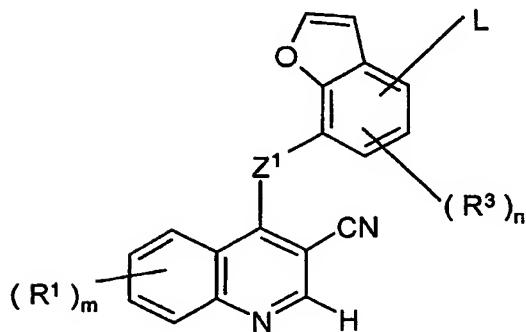
 $Q^1-X^1-$ 

wherein  $Q^1$  is an aryl-(1-6C)alkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl-(1-6C)alkyl or heterocyclyl-(1-6C)alkyl group or an optionally substituted alkyl group and  $X^1$  is an oxygen atom, the coupling, conveniently in the presence of a suitable dehydrating agent, of a quinoline of the Formula V



- wherein  $m$ ,  $R^1$ ,  $Z^1$ ,  $n$ ,  $R^3$ ,  $Z^2$  and  $R^{14}$  have any of the meanings defined in claim 1, except that any functional group is protected if necessary, with an appropriate alcohol of the formula  $Q^1-OH$  wherein any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;
- (c) for the production of those compounds of the Formula I wherein  $R^1$  is an amino-substituted (1-6C)alkoxy group (such as 2-homopiperidin-1-yethoxy or 3-dimethylaminopropoxy), the reaction of a compound of the Formula I wherein  $R^1$  is a halogeno-substituted (1-6C)alkoxy group with a heterocyclyl compound or an appropriate amine;
  - (d) for the production of those compounds of the Formula I wherein an  $R^1$  group contains a (1-6C)alkoxy or substituted (1-6C)alkoxy group or a (1-6C)alkylamino or substituted (1-6C)alkylamino group, the alkylation of a quinoline derivative of the Formula I wherein the  $R^1$  group contains a hydroxy group or a primary or secondary amino group as appropriate;
  - (e) for the production of those compounds of the Formula I wherein  $Z^1$  is a SO or  $SO_2$  group, wherein an  $R^1$  or  $R^3$  substituent is a (1-6C)alkylsulphanyl or (1-6C)alkylsulphonyl group or wherein an  $R^1$ ,  $R^3$  or  $R^{14}$  substituent contains a SO or  $SO_2$  group, the oxidation of a compound of the Formula I wherein  $Z^1$  is a S group or wherein an  $R^1$  or  $R^3$  substituent is a (1-6C)alkylthio group or wherein an  $R^1$ ,  $R^3$  or  $R^{14}$  substituent contains a S group as appropriate;

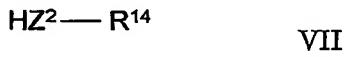
## (f) the reaction of a compound of the Formula VI



VI

wherein L is a displaceable group and m, R<sup>1</sup>, Z<sup>1</sup>, n and R<sup>3</sup> have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the

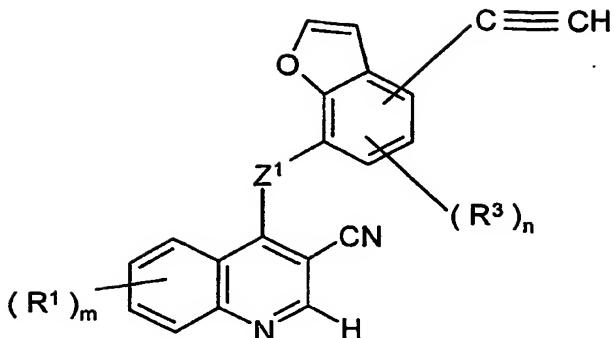
## 5 Formula VII



wherein Z<sup>2</sup> is a C≡C or C(R<sup>13</sup>)=C(R<sup>13</sup>) group and R<sup>13</sup> and R<sup>14</sup> have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

- 10 (g) for the production of a compound of the Formula I wherein R<sup>14</sup> is a carboxy group, the cleavage of a compound of the Formula I wherein R<sup>14</sup> is a (1-6C)alkoxycarbonyl group;
- (h) the reaction of a compound of the Formula I wherein R<sup>14</sup> is a carboxy group with an appropriate amine to form a further compound of the Formula I wherein R<sup>14</sup> is a carbamoyl, N-(1-6C)alkylcarbamoyl, N,N-di-[(1-6C)alkyl]carbamoyl or heterocyclycarbonylamino
- 15 group; or
- (i) a coupling reaction of a compound of the Formula VIII

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VIII

wherein m, R<sup>1</sup>, Z<sup>1</sup>, n and R<sup>3</sup> have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the Formula IX



5        wherein L is a displaceable group and R<sup>14</sup> has any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

and when a pharmaceutically-acceptable salt of a quinoline derivative of Formula I is required it may be obtained using a conventional procedure.

10

9.        A pharmaceutical composition which comprises a quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof as defined in claim 1 in association with a pharmaceutically-acceptable diluent or carrier.

15 10.      A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof for use in a method of the treatment of the human or animal body by therapy.

11.      A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof, as defined in claim 1 for use in the treatment of cancer.

20

12.      The use of a quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof as defined in claim 1 in the manufacture of a medicament for use as an anti-proliferative agent in the containment and/or treatment of solid tumour disease.

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13. The use of a quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof as defined in claim 1 in the manufacture of a medicament for use as an anti-invasive agent in the containment and/or treatment of solid tumour disease.